

Remarks

The non-final Office Action mailed January 25, 2008 rejected all pending claims 1-9, 13-35 and 37-39. The Applicant has hereinabove presented clarifying amendments to independent claims 1, 17, 29 and 37. Support for these clarifying amendments include in the specification at page 25, lines 4-24 and page 27, lines 13-15.

These amendments are proper, do not introduce new matter or narrow the scope of the claimed subject matter, and serve to place the application in proper condition for reconsideration and allowance.

Rejection of Claims Under 35 U.S.C. §112

Claims 17-28 were rejected as indefinite under 35 U.S.C. §112, second paragraph on the basis that the phrase “actuator/coil assembly” was unclear. This rejection is respectfully traversed on the basis that the skilled artisan would have been able to readily identify the meaning of this phrase in view of its ordinary and customary meaning in the art, as well as in view of its usage in the specification. See e.g., the title of the application as well as in the specification at page 20, lines 5-6; page 25, line 24 to page 26, line 3; page 30, line 20 to page 31, line 1.

Nevertheless, an amendment has been presented above to claim 17 to remove this phrase from the claim. It is believed that this amendment obviates the rejection, and reconsideration and withdrawal of the rejection are accordingly requested.

Rejection of Claims 17-28 Under 35 U.S.C. §§102, 103

Claims 17-22 were rejected as anticipated by U.S. Published Patent Application No. US2003/0081355 to Arisaka et al. (“Arisaka ‘355”). Claims 23-28 were rejected as obvious over Arisaka ‘355 in view of U.S. Patent No. 6,867,950 to Lin (“Lin ‘950”) and U.S. Patent No. 6,061,206 to Foisy et al. (“Foisy ‘206”). These rejections are respectfully traversed.

With regard to independent claim 17, Arisaka ‘355 fails to disclose “*disposing an adhesive in said at least one adhesive receptacle after said removing step to further adjoin the bobbin to the coil or the first molded part to the actuator to increase a vibrational stiffness of said single unit,*” as now featured by claim 17.

As noted previously, Arisaka ‘355 discloses pin holes 20 that are formed in a molded bobbin 11 by tooling used to support a coil 6 and/or a reinforcement plate 15 during a molding operation. Arisaka ‘355, FIGS. 2-3 and para [00411], lines 7-12. Arisaka ‘355 further discloses to fill the pin holes 20 with an adhesive after the molding operation “*to seal the pin holes.*” Arisaka ‘355, para [0041], lines 12-14. This discloses, teaches or suggests nothing of any particular significance with regard to the claimed subject matter.

Reconsideration and withdrawal of the anticipation rejection of claims 17-22 are respectfully requested on this basis. Reconsideration and withdrawal of the obviousness rejection of dependent claims 23-28 are respectfully requested on the basis that these claims depend from patentable base claims.

In view of the amended language of claim 17, the Applicant further respectfully submits that amended claim 17 is non-obvious over Arisaka ‘355 and the other art of record. It is noted that an obviousness analysis by the Office requires examination of the claimed combination as a

whole, as well as the combined teachings of the prior art as a whole, with a view toward whether the skilled artisan would find it desirable to modify/combine such prior art teachings to arrive at the claimed combination. *Graham v. John Deere*, 383 US 1 (1966); MPEP 2143.

In the present case, it is noted that the method of amended claim 17 generally applies both an overmolding operation and an adhesive operation to adjoin the same two elements together in order to “*increase a vibrational stiffness of said single unit.*” The combined teachings of the prior art suggest that either of these alternative methods may be applied separately, but nothing teaches or suggests to apply both to connect the same two components together, as generally claimed, nor would the skilled artisan find it desirable to do so.

The claimed combination provides two main advantages not addressed or contemplated by the prior art. First, it has been found that the combined use of overmolding and adhesive to bond the same components together as claimed desirably provides enhanced stiffness characteristics over what would have been achieved using either alternative method by itself. See specification, page 3, line 7 to page 4, line 5; page 25, lines 13-19; page 27, lines 1-9 and 13-15; page 35, line 20 to page 36, line 5.

Second, the claimed combination provides manufacturing efficiencies over prior art adhesive applications in which separate fixturing is required to secure the respective components; no such fixturing is necessary for the claimed combination since the prior overmolding step already fixes the respective components together prior to the application of the adhesive. See e.g., specification, page 27, line 17 to page 28, line 2.

The Applicant respectfully submits that the skilled artisan would not find it desirable to use both overmolding and adhesive attachment mechanisms as claimed from the above cited

references. Arisaka '355 teaches the use of overmolding and is silent with regard to the use of adhesive. Indeed, the addition of adhesive in the overmolding system taught by Arisaka '355 could be viewed as undesirably adding mass to the actuator, thereby increasing the inertia and lowering acceleration response. See paras [0035]-[0036]; [0045]-[0047]; and [0050].

Lin '950 teaches to use adhesive and overmolding in the same actuator, but not between the same components. Rather, Lin '950 teaches the use of adhesive to attach the bobbin to the interior of the coil (col. 5, lines 31-35; col. 5, line 66 to col. 6, line 15), and as desired, applies an overmolding to the "*free end of the wound coil.*" (col. 7, lines 5-18). Foisy '206 merely teaches to overmold actuator components and does not address the use of adhesive. Col. 7, lines 7-19; col. 8, lines 29-45.

When these combined teachings are taken as a whole (per *Graham*), there is nothing other than the Applicant's own disclosure that would suggest the desirability of using both methodologies as claimed. At best, the skilled artisan would find from the combined teachings a suggestion to use either adhesive or overmolding, but not both between the same components. Because the claimed combination provides unexpected and synergistic advantages, the claimed combination is more than a mere combination of familiar elements, and the claimed combination provides more than mere predictable results. *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (2007). Allowance of claims 17-28 is accordingly solicited.

Rejection of Claims 1-9, 13-16, 29-35 and 37-39 Under 35 U.S.C. §103

Claims 1-2, 4-5, 7-9, 16, 23-34 and 37-38 were rejected as obvious over U.S. Patent No. 5,734,528 to Jabbari et al. ("Jabbari '528") in view of U.S. Patent No. 5,623,759 to Thorson et al.

(“Thorson ‘759”). Claims 3, 6, 13-15, 35 and 39 were rejected as obvious over the above references, further in view of Arisaka ‘355. These rejections are respectfully traversed.

None of the above cited references teach or suggest “*disposing an adhesive in at least one adhesive receptacle defined in the overmold material so that the adhesive contactingly engages the coil and the actuator to increase a vibrational stiffness response of the actuator and the coil*,” as featured by amended claim 1.

The Examiner reasons that since Jabbari ‘528 teaches the use of overmolding, and Thorson ‘759 teaches an alternative use of adhesive, the combined teachings would suggest to the skilled artisan the use of both methodologies to attach the same components. This is respectfully traversed as improper hindsight reconstruction of the claim language. *Graham, Supra.*

Jabbari ‘528 teaches the use of a low stiffness overmolding resin to eliminate the problems associated with prior art adhesive applications. See col. 7, lines 17-24 and 43-53; col. 8, lines 36-41. Thorson ‘759 is silent with regard to the use of overmolding, and instead provides an improved adhesive process that reduces the risk of the over application of glue, the clean up of which undesirably adds additional steps to the manufacturing process. Col. 2, lines 23-42.

When the combined teachings of the references are taken as a whole (per Graham), at best the skilled artisan would find it desirable to use either overmolding or adhesive to effect the connection, but not both. This is consistent with the Examiner’s position that the respective methods are “*alternative equivalent means*” of attachment (Office Action, page 5, lines 16-20).

There is nothing that would remotely suggest the desirability or advantages of using both means of attachment to attach the same components as claimed, particularly since Jabbari ‘528

and Thorson '759 each teach away from the claimed combination. Jabbari '528 teaches to use overmolding so as to eliminate the use of adhesive, so it is difficult to see how the skilled artisan would find it desirable to further add the use of adhesive. Thorson '759 finds it undesirable to add additional processing steps to the manufacturing process, so it is difficult to see how the skilled artisan would find it desirable to add additional manufacturing processing steps to apply both overmolding and adhesive in the manner claimed. Arisaka '355 and the other art of record are similarly deficient, as discussed above.

The Applicant respectfully submits that the obviousness determination was based on mere conclusory statements by the Examiner with regard to the obviousness of the combination. As such, the Examiner has failed to provide “*some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.*” *KSR* at 1396, quoting *In re Kahn*, 78 USPQ2d 1329 (Fed. Cir. 2006). Absent such articulated reasoning, the rejection constitutes improper hindsight reconstruction and is improper as a matter of law. *KSR, Supra; Graham, Supra.*

Accordingly, reconsideration and withdrawal of the rejection of independent claim 1, and for the claims depending therefrom, are respectfully requested. As the above references are similarly deficient with regard to the claimed subject matter of independent claims 29 and 37, reconsideration and withdrawal of the rejections of these claims, and for the claims depending therefrom, are also respectfully solicited.

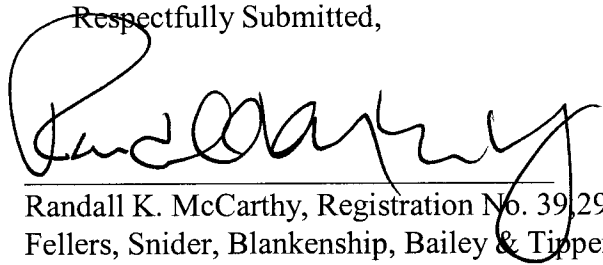
Conclusion

This is intended to be a complete response to the second substantive Office Action mailed January 25, 2008. Reconsideration and allowance of all pending claims are respectfully requested.

Should any questions arise concerning this Response, the Examiner is cordially invited to contact the below signed attorney.

Respectfully Submitted,

By

A handwritten signature in black ink, appearing to read "R. McCarthy", is written over a horizontal line.

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